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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/833,618	04/13/2001	Tarou Kanamori	206171US0	3729

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ALEXANDRIA, VA 22314

EXAMINER

ROBERTSON, JEFFREY

ART UNIT	PAPER NUMBER
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1712

11

DATE MAILED: 02/04/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/833,618

Applicant(s)

KANAMORI ET AL.

Examiner

Jeffrey B. Robertson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 30 December 2002.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 21 and 23-28 is/are allowed.
- 6) ☒ Claim(s) 1,5-9,12,14,15 and 17-20 is/are rejected.
- 7) ☒ Claim(s) 2-4,6,10,11,13,16 and 22 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All   b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)                      4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)                      5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_                      6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Claim Objections***

1. Claims 6 and 22 are objected to because of the following informalities: in claims 6 and 22, line 2, the number 15 appears between "the" and "group". The significance of this number is not understood. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

3. Claims 1, 5-9, 12, 14, 15, and 17-20 are rejected under 35 U.S.C. 102(e) as being anticipated by Ikenaga et al. (U.S. Patent No. 6,165,619) in view of Kato et al. (U.S. Patent No. 6,231,988).

The Ikenaga reference was found as a result of a new search conducted as a result of applicant's amendment of claims not previously treated on the merits and claiming cured products. The Kato reference is provide solely for the purpose of identifying the commercial photocatalyst used by Ikenaga in accordance with MPEP § 2131.01 III.

For claims 1 and 5, in column 2, line 50 through column 3, line 56, Ikenaga teaches a functional coating material (2), comprising components (A), (B), (C), and (F). Component (A) is an organosilane oligomer corresponding to applicant's component (a), where the component is produced by hydrolyzing a hydrolytic organosilane that corresponds to applicant's formula (1). Note that that the formula set forth by Ikenaga in column 2, (formula (I)), encompasses applicant's formula (1) when X equals alkoxy (see column 8, lines 16-22, where Ikenaga prefers an alkoxy group for X). In column 10, lines 41-51, Ikenaga teaches that component (B) is an polyorganosiloxane that has a Mw of 700-20,000, which is within the range claimed by applicant for component (b) in claims 1 and 5. In column 3, lines 55-56, Ikenaga teaches a photocatalyst (F), corresponding to applicant's photocatalyst (c). In column 20, lines 58-67, Ikenaga teaches a preparation example of functional coating material (2), where the solvent is methanol. This fulfills applicant's (d') component, because methanol has a surface tension of less than 260  $\mu\text{N}/\text{cm}$  at 20° C. For claims 14, and 17, it is also noted that there is isopropyl alcohol present as well, since the components (A-1) and (B-1) are introduced as solutions in isopropyl alcohol. See column 20, lines 14-55.

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For claim 5, in this example, Ikenaga teaches that the photocatalyst is titanium dioxide, a commercial product of Ishihara Sangyo Co. with the designation STS-02. In column 38, lines 55-60, Kato teaches that STS-02 is a 30% aqueous dispersion. Neither Kato nor Ikenaga teaches the pH of STS-02. However it appears inherent that the pH of STS-02 is between 3-9. "[T]he PTO can require an applicant to prove that the prior art products do not necessarily or inherently possess the characteristics of his [or her] claimed product. Whether the rejection is based on inherency' under 35 U.S.C. 102, on prima facie obviousness' under 35 U.S.C. 103, jointly or alternatively, the burden of proof is the same...[footnote omitted]." The burden of proof is similar to that required with respect to product-by-process claims. In re Fitzgerald, 619 F. 2d 67, 70, 205 USPQ 594, 596 (CCPA 1980) (quoting In re Best, 562 F.2d 1252, 1255, 195 USPQ 430, 433-34 (CCPA 1977)). It is noted that the only organic solvents present in Preparation Example 2-1 are methanol and isopropyl alcohol, which both have surface tensions of less than 260  $\mu\text{N}/\text{cm}$  at 20° C, and thus fulfills the requirement that less than 20% of the organic solvent present has a surface tension of greater than 260  $\mu\text{N}/\text{cm}$  at 20° C.

For claims 6, 12, and 15, in column 20, lines 13-32, Ikenaga teaches an organosilane that falls within the definition of (a-2), in methyltrimethoxysilane, where there is no epoxy group present.

For claims 7 and 18 Ikenaga teaches that a cured product is formed after the functional material (2) is applied to the substrate in column 17, lines 3-7. In column 14,

line 66 through column 15, line 9, Ikenaga teaches that the coating can be dried at room temperature or through the application of heat.

For claims 8, 9, 19, and 20, Ikenaga teaches the presence of an undercoating corresponding to applicant's undercoating (i) in column 2, line 33 through column 3 line 33, where applicant's component (a) corresponds to component (A) taught by Ikenaga as described above. Applicant's component (e) corresponds to component (D) taught by Ikenaga in column 3, lines 15-33, where R<sup>4</sup> is an alkoxy silyl and /or halogenated silyl group.

***Allowable Subject Matter***

4. Claims 2-4, 10, 11, 13, and 16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
5. Claim 22 would be allowable if rewritten to overcome the claim objection set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.
6. Claims 21 and 23-28 are allowed.
7. The following is a statement of reasons for the indication of allowable subject matter: Ikenaga fails to teach or suggest the addition of a polymer containing a silyl group having a silicon atom bound to a hydrolytic group to the functional coating material (2). Ikenaga also fails to teach or suggest the use of a silane containing an epoxy group in the functional coating material (2).

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***Response to Arguments***

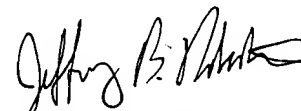
8. Applicant's arguments with respect to claims 1, 5, and 6 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey B. Robertson whose telephone number is (703) 306-5929. The examiner can normally be reached on Mon-Fri 7:00-3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert A. Dawson can be reached on (703) 308-2340. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.



Jeffrey B. Robertson  
Examiner  
Art Unit 1712

JBR  
January 28, 2003